

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

ATTY DOCKET NO.  
2000\_1390SERIAL NO.  
09/677,420U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)APPLICANT  
Mitsuaki OSHIMA et al.

Date Submitted to PTO: April 11, 2005

FILING DATE  
October 5, 2000GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ						
	AK						
	AL						
	AM						
	AN						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>DA</i>	AO	J. A. C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come", IEEE Communications Magazine, Vol. 28, May 1990, pages 5-8 and 11-14
<i>DA</i>	AP	B. Hirosaki, "An Orthogonally Multiplexed QAM System Using the Discrete Fourier Transform", IEEE Transactions on Communications, Vol. Com-29, No. 7, July 1981, pages 982-989
<i>DA</i>	AQ	L. J. Cimini, Jr., "Analysis and Simulation of a Digital Mobile Channel Using Orthogonal Frequency Division Multiplexing", IEEE Transactions on Communications, Vol. Com-33, No. 7, July 1985, pages 665-675 and Annex

EXAMINER *D. Muller*DATE CONSIDERED *04/05/05*

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

MAR 23 2005

ATTY DOCKET NO.  
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09/677,420U.S. DEPARTMENT OF COMMERCE  
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Date Submitted to PTO: March 23, 2005

APPLICANT  
Mitsuaki OSHIMA et al.FILING DATE  
October 5, 2000GROUP  
2634

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DH	AA	3,824,548	7-16-74	Sullivan et al.	—	—	—
	AB	3,959,726	5-25-76	Hinoshita et al.	—	—	—
	AC	4,303,939	12-1-81	Stephens et al.	—	—	—
	AD	4,303,941	12-1-81	Marti et al.	—	—	—
	AE	4,309,726	1-5-82	Tanaka et al.	—	—	—
	AF	4,535,352	8-85	Haskell	—	—	—
	AG	4,564,858	1-14-86	Resch	—	—	—
	AH	4,581,639	4-8-86	Judge	—	—	—
	AI	4,769,819	9-6-88	Matsutani et al.	—	—	—
	AJ	4,794,447	12-27-88	Tsinberg	—	—	—
	AK	4,817,192	3-28-89	Phillips et al.	—	—	—
	AL	5,029,003	7-91	Jonnalagadda	—	—	—
	AM	5,134,464	7-28-92	Basile et al.	—	—	—
DH	AN	5,400,084	3-21-95	Scarpa	—	—	—
	AO						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AP						

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

AQ	
AR	

EXAMINER

*D. Callahan*

DATE CONSIDERED

07/05/05

Sheet 2 of 3		INFORMATION DISCLOSURE STATEMENT						
FORM PTO 1449 (modified)			ATTY DOCKET NO. 2000_1390		SERIAL NO. 09/677,420			
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			APPLICANT Mitsuaki OSHIMA et al.					
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			FILING DATE October 5, 2000			GROUP 2634		
Date Submitted to PTO: March 23, 2005								
U.S. PATENT DOCUMENTS								
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
DH	AA	5,181,112	1-19-93	Citta et al.	—	—	—	
	AB	5,377,051	12-27-94	Lane et al.	—	—	—	
	AC	5,576,902	11-19-96	Lane et al.	—	—	—	
	AD	5,218,622	6-8-93	Fazel et al.	—	—	—	
	AE	5,561,468	10-1-96	Bryan et al.	—	—	—	
	AF	5,802,241	9-1-98	Oshima	—	—	—	
	AG	5,007,088	4-9-91	Ooi et al.	—	—	—	
DH	AH	5,170,413	12-8-92	Hess et al.	—	—	—	
	AI							
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
DH	AJ	3-69295	3-25-91	Japan	—	—	X	
DH	AK	2-260726	10-23-90	Japan	—	—	X	
DH	AL	58-161427	9-26-83	Japan	—	—	abstract	
DH	AM	57-39629	3-4-82	Japan	✓	—	abstract	
DH	AN	58-161547	9-26-83	Japan	—	—	abstract	
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AO							
	AP							
	AQ							
EXAMINER	<i>D. L. Miller</i>			DATE CONSIDERED 07/05/05				

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 3 of 3							
FORM PTO 1449 (modified)			ATTY DOCKET NO. 2000_1390		SERIAL NO. 09/677,420		
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			APPLICANT Mitsuaki OSHIMA et al.				
LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)			FILING DATE October 5, 2000		GROUP 2634		
Date Submitted to PTO: March 23, 2005							
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DH	AA	5,128,758	7-7-92	Azadegan et al.	—	—	—
	AB	5,038,402	8-6-91	Robbins	—	—	—
	AC	5,638,112	6-10-97	Bestler et al.	—	—	—
	AD	5,063,445	11-5-91	Nishizawa et al.	—	—	—
	AE	5,819,000	10-6-98	Oshima	—	—	—
	AF	5,999,569	12-7-99	Oshima	—	—	—
	AG	5,892,879	4-6-99	Oshima	—	—	—
	AH	6,049,651	4-11-00	Oshima	—	—	—
DH	AI	6,256,357	7-3-01	Oshima	—	—	—
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
DH	AJ	63-180222	7-25-88	Japan	—	—	abstract
DH	AK	2-94814	4-5-90	Japan	—	—	abstract
DH	AL	61-70861	4-11-86	Japan	—	—	abstract
DH	AM	2-218279	8-30-90	Japan	—	—	abstract
DH	AN	2,095,435	5-10-92	Canada	—	—	X
DH	AO	91/20137	12-26-91	WO	—	—	X
DH	AP	92/22162	12-10-92	WO	—	—	X
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AQ						
EXAMINER	<i>Dan Lulla</i>		DATE CONSIDERED	07/05/05			

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FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) Date Submitted to PTO: July 20, 2004			ATTY DOCKET NO. 2000_1390		SERIAL NO. 09/677,420			
			APPLICANT Mitsuaki OSHIMA et al.					
			FILING DATE October 5, 2000		GROUP 2634			
U.S. PATENT DOCUMENTS								
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	AA							
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	AC							
	AD							
	AE							
	AF							
	AG							
	AH							
	AI							
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
<i>DA</i>	AJ	2-154583	6-13-90	Japan			abstract	
	AK							
	AL							
	AM							
	AN							
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)								
<i>DA</i>	AO	Shigeki MORIYAMA et al., "Delay Propagation Characteristics at VHF and UHF bands in Urban Area", 1991 Spring National Convention Record, The Institute of Electronics, Information and Communication Engineers, Part 2, p. 406, March 15, 1991						
<i>DA</i>	AP	Yasuhiro ITO et al., "Adaptive Weighted Code Division Multiplexing (AW-CDM) Transmission System for Terrestrial Digital Television Broadcasting", ITE Technical Report Vol. 17, No. 13, pp 27-32, February 25, 1993						
	AQ							
EXAMINER	<i>De Lille</i>		DATE CONSIDERED		<i>8/10/05/05</i>			

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